

Reply to Notice of Non-Compliant Amendment of 11/8/04 and Office action of Election/Restriction of 8/

Appn. Number: 10/050,193

Appn. Filed 01/16/2002

Reply to Non-Compliant Amendment of 11/8/04 and  
Office action of 8/8/05

### **Amendments to the Specification:**

Please replace this section of the specification page [69 to page 70] with the following amended section of the specification:

#### **Audio-Cell Audio-Cell Acoustic Enhancement Communication**

#### **Abstract**

[Page 69-70] A communication system 41 and 77 communicating apparatus (,) having a crossover network comprising at least one audio enhancing circuit (47) consisting of at least one input port or input section which is capable of inputting original audio signals from at least one output port or output section of at least one acoustic source, such a microphone. Furthermore, said at least one audio enhancing circuit is capable of enhancing said original audio signals to magnificently enhanced quality value that is at least in part of intelligible perimeter in which is important for reasonable perception. Said magnificently enhanced quality value extends from the acoustic value of "telephone quality audio signals" thereto enhanced acoustic value. Thereby, said at least one audio enhancing circuit further employs at least one or two communicative channels which are able to channel the acoustic enhancement communication procedure in a simplex or duplex mode thereof and provides at least one band of audio signals or at least three bands of audio signals that are able to band predetermine audio signals for the emphasis of audio tone herein, and control means are provided to the audio enhancing circuit for controlling said audio signals and to comprising (a) tunable selecting means (,) coordinating with a volume peaking means for giving provide a user with the option of subjective control to select and boost a preferred audio setting while communicating said audio signals, to a user (,) said crossover network is adapted for dividing and tuning at least three band (of audio) frequency signals while transmitting and receiving communication or said at least one audio enhancing circuit is able to provide fixed components herein, such as, fixed capacitors, fixed resistors, fixed inductors, et cetera for the implementation of fixed enchantment acoustic quality value thereof.

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~~Fig. 8~~ Fig. 9 (Illustrate) ~~Illustrates~~ illustrates a ~~ruff rough~~ rough draft view of ~~signals flows~~ an audio signal flowchart demonstrating one band or one channel of audio signals communicating throughout ~~through-out~~ an entire acoustic enhancement communication system. The method of one band or one channel communication employs a unique one-way tunable crossover network or tunable filter circuit having only one output channel whereby producing only one channel of plural band enhanced audio signals for communicating the enhanced audio signals to a communication system. Thereby, the one-way tunable crossover network or tunable filter circuit herein driving at least one full-range speaker or at least one various-range speaker system, which depends on the arrangement of the application hereof, ~~through-out-a~~ Signal Signals flows flow 53 from (a) microphone output the output-section 26 of a microphone 84 then throughout the acoustic enhancement communication system. Horizontally to the right of said microphone is a ~~errossover-network~~ one-way crossover network circuit or tunable filter circuit. From the microphone's the output section signals of said microphone, original audio signals are sent to the input port 87 or input section of ~~a 3-way errossover-network~~ the 1-way crossover network circuit or tunable filter circuit 103 which consist of a 3-way crossover network, and a serial transmission IC timer circuit in which said original audio signals are generated into three, then one multi-band or one-multi channel of enhanced audio signals. The one band or one channel of filtered enhanced audio signals that emit from said 1-way crossover network circuit or tunable filter circuit is then ~~applies input-signals~~ applied to the input of a an audio amplifier preamplifier 28. Horizontally to the right of said audio amplifier preamplifier is (a) an adjacent audio-transmitting transmitter section 86 that is enclosed with an adjacent receiver in a transceiver device. ~~Said~~ The one band or channel of enhanced amplified pre-amplified audio signals that output from the said audio preamplifier amplifier- (is) is entered-into then injected into said adjacent transmitting transmitter section. From the output section of the transmitter, said one band or one channel of enhanced audio signals is injected to the input of a Hybrid Network 104. Vertically to the left of the adjacent transmitter transmitting device 86 is (a) ~~receiving-audio-section~~ the adjacent receiver section 85(,) where in which the one channel of multi-bands or one band of enhanced audio signals from the output of said Hybrid Network are ~~said input-signals-are~~ respectively join-to-the injected to the input of said audio-receiving the receiver section. Whereby, the received enhanced audio signals drives at least one full range speaker or a speaker system of the communication system hereof; providing that, said receiver section consist of an integrated retrieval circuit at the end audio circuit of the receiver that is able to retrieve the parent divided band of audio signals which was produced by the preceding 3-way crossover network circuit that was arranged to produce and output the divided bands of audio signals to the IC timer circuit then to said receiver section that includes the integrated retrieval circuit, thereby, retrieving the received enhanced audio signals that drives at least one full range speaker or at least one various-range speaker system of the receiver hereof.

Illustrative Fig. 4H illustrates a method of constituting control means in an audio enhancing circuit such as a crossover network circuit which incorporates a communication system in which thereby enables the acoustic enhancement communication system to tune and control audio signals while communicating said audio signals to a corresponding communication system therein. At least one of each control element may apply to this application as follows: a variable input dB gain control circuit 90 connected to the main input terminals of the crossover network circuit for varying the gain of input signals, a variable millisecond delay control circuit 54 connected to said crossover network circuit, a variable low dB gain control circuit 93 connected to a section of the low band-pass filter circuit 35 for varying the gain of low band range audio signals, a variable low-range frequency control circuit 94 connected to the low band range filter circuit whereby varying the frequency range of low-band pending audio signals thereof, a variable high frequency gain control circuit connected to a section of the high band-range filter circuit 34, a variable mid frequency gain control circuit 94 connected to the two element mid band pass filter circuit 36 for varying the gain of mid-band range audio signals, a high frequency dB gain control circuit 94 connected to the one element high band-pass filter circuit for varying the gain of high range audio signals, a variable master dB gain control circuit 123 connected at the output of the crossover network circuit and a threshold dB control circuit connected to said crossover network circuit. Fig. 4E show shows a switch, (a) an IC chip, control means tunable means and peaking means(,) and illustrates the constitution of a unique an integrated control circuit of an audio enhancing circuit such as a crossover network circuit. The center pole of a switch comes-in-contact-with is connected to a MF8 IC timer chip. The diagram in Figs. 4A to Fig. 4G and Fig 4E illustrates illustrate connections of a switch and (a) an IC chip timer. From a positive 5-volt 5-volt positive Vee terminal, 15 contact 70 is made to the center-pole 46 of a multi-position rotary switch. From (a) an output (26) point section of the IC timer chip 54, a contact (70) is made to (a) the conductor of a male connector. The male connector thereby engages 37 with a female connector.

An external dispensable port or external acoustic-connection implements a dispensable coupling method, which is entitled *The Reconcilable Voluntary Dispensable Coupling Method*. This extraneous coupling-method is briefly expressed in the following interpretations.

Illustration Fig. 6B(.), Fig. 6E, Fig. 6F and Fig 6G Illustrates (a) connection demonstrates connection procedure, which is precondition according to the conditions that an audio enhancing circuit provides. For instance, a 3-way crossover network produces 3 bands of audio signals. Therefore, Fig. 6E illustrates the specified coupling arrangements of this manner etc. Accordingly, connections are made from (a) an autonomous indispensable receiving receiver section of a communication system to (a) an external dispensable output-section coupling, audio port, or a wireless acoustic system having said output audio section adapted for the voluntary ~~external~~ coupling procedure that incorporates an audio reproductive system of a motor vehicle or other independent audio reproductive systems with a communication apparatus thereof. From the positive 15\_collector output terminal of a transistor(,) (on) of a receiving receiver section, a connection 70 is made to a series capacitor. At the opposite end of said capacitor series capacitor, contact is made to the positive terminal (15) of (a) female port coupling means the dispensable output port 87 of the receiver. From the negative terminal 14 of said port coupling means dispensable output port, a conductor 44 comes in contact with (a) an earth ground terminal at the opposite end of said conductor in of said receiver.

From said second output channel of said audio enhancing preamplifier circuit, a (A) negative input connection is made to the earth ground 66 terminal of said second transistor-unit of the transmitter section. From a third output channel of said audio-enhancement preamplifier circuit, a (A) third input connection is made to said second-transistor's the positive base terminal of a third transistor-unit in of said audio transmitter section. From said third output channel of said audio enhancement-preamplifier circuit, an (A) input connection is made to another a ground terminal of said third second transistor-unit (,) in of said audio transmitter section. From the output section of the transmitter, three output channels of the transmitter are respectively connected to three input channels of a hybrid network.

The following specification refer to an audio enhancing circuit, such as an audio enhancing circuit that is designed for enhancing audio signals or original audio signals that derive from a source of interest, such as at least one acoustic source which may be vocal acoustic source. Said audio enhancing circuit is an audio processing circuit, such as an audio equalizer circuit or other audio circuit that enhance audio signals, such as a crossover network circuit in which enhances said originals audio signals to refine acoustic value or perimeter for the conveyance of the enhanced audio signals for means of enhanced acoustic communication. Furthermore, said audio enhancing circuit consist of at least one audio input port or at least one audio input section that is capable of inputting said original audio signals from said acoustic source to said audio enhancing circuit, and further said audio enhancing circuit is able to be integrated with other audio enhancing circuits herein. Therefore, the integration of said audio enhancing circuit is capable of implementing comprehensive audio enhancement communication procedure thereof. For the conveyance of high quality audio signals herein, multiplexing technique may apply, as stated in the subsequent section hereof. Under the provided terms, the The description Fig. 3E below illustrates (a) an audio enhancing circuit, such as said crossover network circuit connecting to (a) the input port coupling-means(,) for a responding the correspondents of said original audio signals from said acoustic source, such as a microphone; in which, the microphone then input outputs signals that thereby emits to said crossover network circuit. Thus, the communication procedure employs the enhanced audio signals with the corporation of the audio enhancing circuit that process the signals to refined degrees according to variable technical arrangements herein. This procedure implements a mode that communicates enhanced acoustic signals in at least one direction. Therefore, this method is entitled *The One-Way Audio Enhancing Communication Method*.

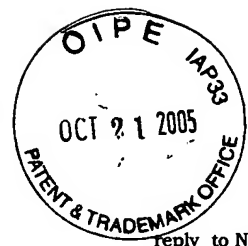
Fig. 3E illustrates(,) (a) ~~port-coupling-means~~ an input-port 87 for inputting said original audio signals from the output section of the microphone thereby connecting said original audio signals from said output section of said microphone to the main input 25 of a high band-pass filter circuit in of a crossover network circuit. From the positive terminal 15 of a high band-pass one-element one-element filter circuit, a contact is made to a conductor 44. From the opposite end of the-same said conductor, a contact is made to the positive terminal 15 of (a) the port-coupling-means input-port 87 for inputting said original audio signals of said microphone. From the negative 14 terminal of the same input-port port-coupling-means , a connection is made to the negative terminal of said high band-pass band-pass one element filter circuit.

A prior invention ~~relating~~ relatives to a magnetic hearing aid which accordingly couples with a communication system for hearing to aid in the conveyance of audio signals during communication procedures is provided in US U.S Patent number 5740257 by Marcus; Larry Allen April 14, 1918 which describes a magnetic coupling hearing aid with active noise control for eliminating noise by generating a representation of the original input signal. (,) Thereby, the generation is employed to drive an individual external ~~earphone~~ (,) field coil. The external field coil is positioned between the handset receiver and the handset audio output ports ~~position~~ for easy access or convenient operation to a user. A receiving apparatus is disposed into the ear cavity for signal response and to drive a magnetic field(,) comprising an interior cavity and (a) an audio output port for inputting signals to (a) an ear cavity(,) having a receiver in said interior for receiving (a) an audio signal and transducer for communicating with said ear cavity.

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Today Due to the hazardous conditions that wireless telephones influents when employed under mobile conditions that an automobile provide, they there are many laws passed through-out throughout the country U.S banding banning these wireless telephones telecommunication devises from motor vehicles, such as US U.S public law 100-394 August 16, 1988 which requires requiring hand-held handheld communication devices, such as wireless telephones to be coupled with an external hearing aid because of (it's) its potential hazard to motorist motorists and pedestrians.





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### **Amendments to the Specification:**

Please replace the following specification from page [1 to 13] with the following amended specification page:

#### **Background-field of invention**

[1-13] This invention (relate) relates to ~~crossover networks~~ (,) variable or invariable audio enhancing circuits of communication such as an audio circuit that is provided for enhancing audio signals that derive from an acoustic source more specifically for enhancing acoustic quality of communication systems. The invention further reflects on means for conveying audio signals such as multiplexing techniques and coupling methods of communication. The audio enhancing circuit, as described, refers to audio enhancing circuits, such as audio processing circuits and other audio enhancing circuits for providing acoustic enhancement communication procedures to a communication system. audio-ports, electronic coupling mediums and electronic (acoustic hearing aids,) for enhancing a communicating audio- (section.)

#### **Background--Description of Prior Art**

Wireless Radio communication are is an exiting new concept, but this phenomenon can also be bring forth harmful communicating communicational conditions devises. In referents to the remote mobility that these wireless communication devises provides, Telecommunication apparatus it may be reasonable to state under mobile conditions, that wireless telephones are used any where from a personal habitant commercial and residential areas to automobiles.

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Due to the hazardous conditions that wireless telephones influents when employed under mobile conditions that an automobile provide, there are many laws passed throughout the U.S banning these wireless telephones from motor vehicles, such as U.S public law 100-394, August 16, 1988 which requires handheld communication devices, such as wireless telephones to be coupled with an external hearing aid because of it's potential hazard to motorists and pedestrians.

Fig. 5A to 5G. shows (a) an audio cable comprising (a) an integrated circuit(,) adopted to couple externally with a communication apparatus and oppose a band of frequency. ~~wherein~~ Wherein, a ~~positive~~ right side conductor wire is parallel to a ~~negative~~ left side conductor wire and they both flow in a separate parallel motion, having one side of the circuit conducting low ~~rang~~ range frequency and the other side conducting high range frequency. ~~The internal~~ Internally, the integrated cable ~~eonsist~~ consists of(,) two wires, which runs parallel until the output plug contact points. The cable further ~~eonsist~~ consists of two separate filter eircuit circuits (,) adjacent to each other. Said integrated circuit is an insignificant segment of said audio cable. Therefore, the integrated circuit is not essential to said audio cable. Consequently, an alternative method of coupling the cable from said communication apparatus to an external reproductive system may exclude or omit said integrated circuit from the application. Thereby, said audio cable will be able to be employed as an independent entity and completely eliminates said integrated circuit from the coupling method or application herein.